Transfer of *Crinum nerinoides* to *Ammocharis* (Amaryllidaceae)

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ABSTRACT. Lack of field observations previously hampered taxonomic discussions of *Crinum nerinoides*. Several investigators suggested that this plant might be *Ammocharis* rather than *Crinum;* however, definitive reclassification was impossible because pressed specimens often provide inadequate material to differentiate between the two genera. During a Namibian expedition in 1991, this taxon was observed in flower and in fruit; the morphological features were specific for *Ammocharis*.

Baker (1903) worked from a single incomplete specimen when he described *Crinum nerinoides* Baker. The pressed specimen originated in Namibia (formerly South West Africa) 11 years prior to Baker's account and consisted only of a scape bearing an umbel of seven flowers; no drawings or descriptive field notes accompanied the specimen.

After Milne-Redhead and Schweickerdt examined the type specimen, they attached a determinant slip annotated with "probable *Ammocharis coranica*." However, in revising the genus *Ammocharis*, Milne-Redhead and Schweickerdt (1939) made the following statement about *C. nerinoides:* "This is most probably an *Ammocharis*, but the type material is too incomplete to be placed with certainty." Sölch (1969) discussed *C. nerinoides* under the heading "dubious species" of *Ammocharis*, but he also concluded that the type material was too incomplete to be classified generically.

Verdoorn (1973) recognized *Crinum nerinoides* in her revision of the southern African species and cited two new herbarium collections of the species, both also from Namibia. Roessler (1974) followed Verdoorn's treatment in his review of Namibian *Crinum*. The paucity of herbarium materials led Roessler to remark that *C. nerinoides* was rare. Duncan (1982) cultivated and propagated bulbs of *C. nerinoides* collected in Namibia; these were illustrated by several artists, most recently Brodley (Plessis & Duncan, 1989).

Ammocharis and *Crinum* are closely related genera and can be confused in herbarium mounts. The outstanding morphological feature that separates these genera is the leaf arrangement: distichous and biflabellately arranged in *Ammocharis;* rosulate or distichous but never biflabellately arranged in *Crinum*. Leaves are sheathed at the base in *Crinum* but not in *Ammocharis*. Unfortunately, the investigators who dealt with *C. nerinoides* were unaware of its leaf arrangement, a character best seen in the field.

During a Namibian expedition in January–February 1991, D. Hardy of the National Research Institute (PRE) and I came upon a huge colony of *C. nerinoides* growing in a pasture at Farm Okaseko in the Gobabis District; these bulbs carpeted an area approximately 200 × 20 m (estimated number in excess of 20,000). By chance, about 25 bulbs were blooming late, since this species ordinarily blooms in December after the onset of the rainy season. All of the plants had well-developed foliage because local rainfall had been unusually abundant. The leaves were clearly distichous and biflabellately arranged (Fig. 1A), and sheathing of leaves was absent at the base; the plant was an *Ammocharis*, not a *Crinum*. Also, the fruiting bodies were partitioned by three shallow furrows in the pericarp, differing from fruiting bodies of *Crinum*, which lacked furrows (Herbert, 1837). We found a second cluster of blooming bulbs surrounding a limestone pan near the town of Aminuis (Fig. 1B).

Ammocharis nerinoides (Baker) Lehmiller, comb. nov. Basionym: *Crinum nerinoides* Baker, Bull. Herb. Boissier ser. 2, 3: 666. 1903. TYPE: Namibia. Gobabis District: Hereroland, 1892, *Dove s.n.* (holotype, Z).

Bulb ovoid, covered with a brown papery tunic, 20–51 mm diam., tapering into a neck 50–85 mm long. Leaves 4–10, distichous and biflabellately arranged, arching or sprawling on the ground, linear, mildly channeled, minutely serrated on the margins, green, all but new leaves growing out with truncated ends, 130–380 mm long and 3–10 mm wide. Scape compressed, reddish green, 40–115 mm long. Spathe valves papery at anthesis. Umbel 1–7-flowered; flowers actinomorphic, scented. Pedicels 8–19 mm long. Ovary a small swelling 3–5 mm long and 3–4 mm wide. Perigone tube not curved, red, 13–20 mm long. Perigone segments lanceolate, distally recurved, pink with a broad dull red stripe on the dorsal keel, unequal with the inner narrower, 43–

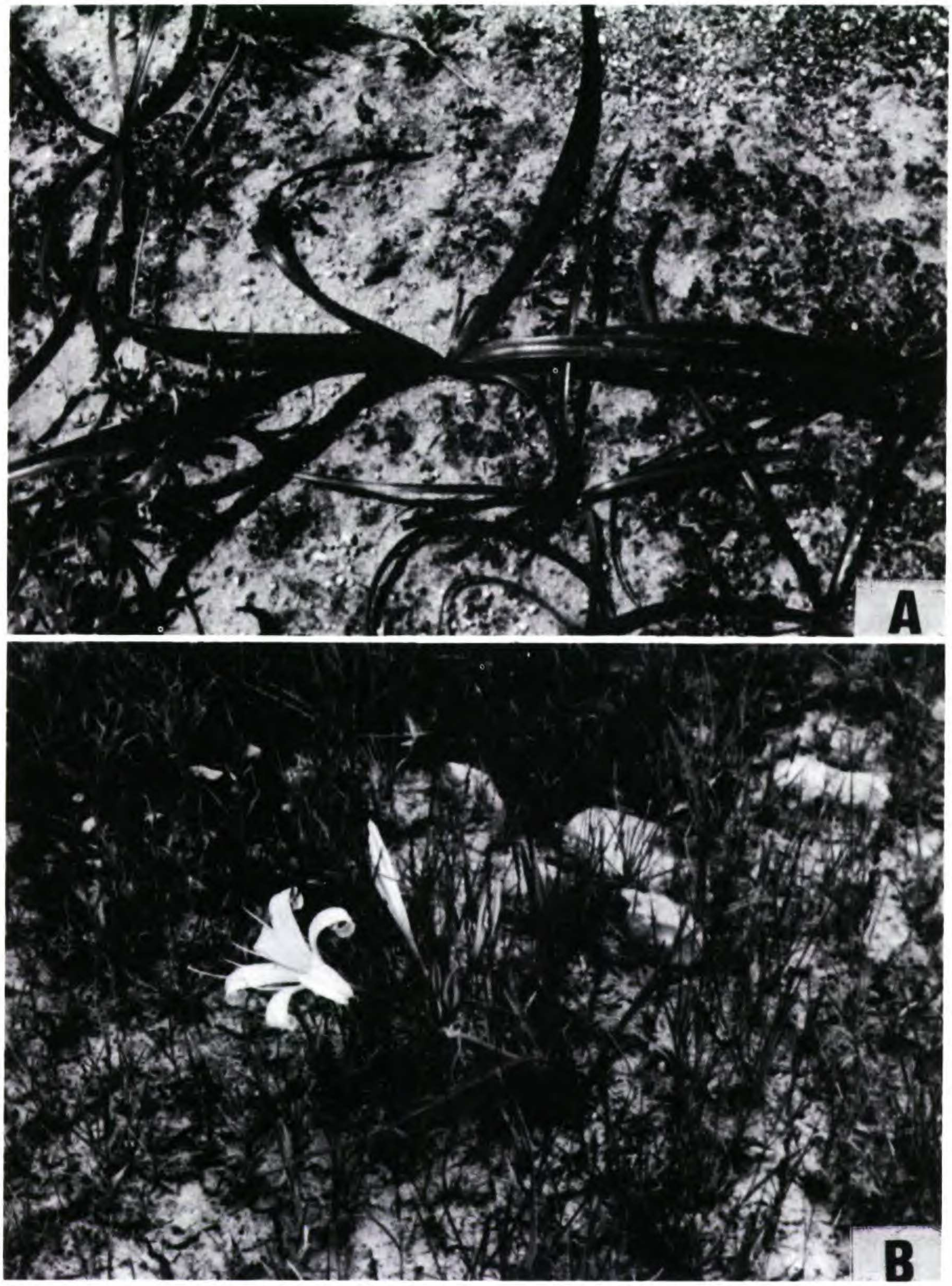

Figure 1. *Ammocharis nerinoides* (Baker) Lehmiller. —A. Distichous leaves, biflabellately arranged. Namibia, Gobabis District, Farm Okaseko, 31 January 1991. —B. Blooming bulb. Namibia, Gobabis District, Hereroland East #2, 2 km north of Aminuis, 1 February 1991.

47 mm long and 8–11 mm wide. Filaments pink, unequal with the inner longer, 38–41 mm long; anthers white, turning dark tan and becoming curved at maturity, 3 mm long; pollen gray. Style pink, 37–45 mm long, with a tiny capitate stigma. Fruit subglobose, marked with three furrows and appearing trilobulated, often with a short apical beak to 5 mm long, reddish brown, 18–20 mm diam., indehiscent; seeds 3–12 per fruit, ovoid or angled by pressure to resemble parts of a sphere, smooth, light green, to 12 mm diam.

Habitat. Arid ecology with an erratic, summer rainy season. Open grasslands in low places or near limestone pans; clayish calcareous soils. Flowering induced by summer rains.

Additional specimens examined. NAMIBIA. GOBABIS DISTRICT: Farm Nico, 1958, *Merxmüller & Giess 1176*

(PRE); Farm Eskadron, 1969, *Mason & Boshoff 2516* (PRE); Farm Combumbi, 1977, *Giess 14919* (WIND); Farm Okaseko, 1991, *Hardy 7231* (PRE); Hereroland East #2, 2 km N of Aminuis, 1991, *Hardy 7235* (PRE). ETOSHAPAN: Adamax, 1974, *le Roux 596* (PRE); same locality, 1975, *Müller 196* (WIND).

Ammocharis coranica (Ker-Gawl.) Herb., which is epidemic in Namibia, is a huge bulb in comparison to *A. nerinoides* and is easily distinguished among herbarium mounts on the basis of bulb diameter, leaf width, scape dimensions, and umbel size; the floral parts are remarkably similar. In the field, the many-flowered bright-red umbels and wide leaves of *A. coranica* could never be confused with the diminutive, few-flowered pink umbels and narrow leaves of *A. nerinoides*. The specific epithet "nerinoides" is most appropriate since, when casually observed, *A. nerinoides* resembles a species of *Nerine*.

While in Windhoek I visited W. Giess, who was curator of the Namibian Herbarium (WIND) for 40 years and is now retired. During the interview Giess kindly projected 35-mm color slides recording *A. nerinoides* in bloom at Farm Nico and Farm Combumbi (see list of specimens examined). Giess also permitted me to examine field-collected bulbs, which he cultivated in his garden; these too exhibited biflabellately arranged, distichous leaves.

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